Update: Ongoing Inquiry into Melioidosis Illness at Tulane National Research Center

Late November 2014, two non-human primates in the breeding colony at the Tulane National Primate Research Center (TNPRC), a private research facility, became ill. In mid- December 2014, samples submitted to the U.S. Centers for Disease Control and Prevention (CDC) identified Burkholderia Pseudomallei as the causative agent. This strain of bacteria is not endemic in the US but was the subject of research at TNPRC. Because Burkholderia Pseudomallei is a tier 1 agent and the material was considered not in containment, the CDC and U.S. Department of Agriculture (USDA) initiated a joint investigation of TNPRC in January 2015. As part of the investigation conducted January 20-24, federal and state scientists visited the TNPRC site to conduct epidemiological study and to review lab practices to determine possible route of transmission.

Animal IB22, one of two animals initially confirmed with Burkholderia pseudomallei infection, was euthanized last month at the recommendation of TNPRC veterinarians. IB22 had previously resolved all signs related to Burkholderia infection after receiving a course of antibiotics, the last dose of which occurred on January 5, 2015. Since that time IB22 has been monitored in the hospital. In Mid-February, IB22 demonstrated decreased appetite and was examined by the veterinarian in charge on Thursday, Feb. 19. During the examination, two skin ulcerations and testicular swelling were noted. Several veterinarians were consulted and agreed that another course of antibiotic therapy should not be attempted. A decision to humanely euthanize the animal was made. Samples were collected for submission to the CDC and the TNPRC clinical pathology laboratory. A third monkey was also treated for showing an immune response to exposure.

Additional testing last month indicated a fourth non-human primate exhibited antibodies to Burkholderia pseudomallei at the Tulane National Research Primate Center breeding colony. The animal's only contact with the others monkeys was at the center's veterinary clinic. CDC and USDA/APHIS investigators, as part of their ongoing efforts, will focus efforts on the veterinary clinic as a possible source of cross-contamination between the animals. The investigation into how the bacteria may have migrated to the primate colony from the select agent laboratory continues.

More testing by CDC this week identified a fifth non-human primate at the Tulane National Research Primate Center breeding colony with antibodies to Burkholderia pseudomallei. The animal's only contact with the four other monkeys (two diagnosed with Melioidosis and two showing an immune response to exposure) was at the center's veterinary clinic, which has since been decontaminated. The decision was made to euthanize the animal.

Recently, one of the USDA investigators fell ill with unspecific symptoms. A blood test was conducted and test results from Friday, February 6th indicated a presence of antibodies in the blood indicating some exposure to BURKHOLDERIA PSEUDOMALLEI. The investigator was discharged from the hospital a few days later and she is no longer sick. The person's travel history does include a visit to a region that may have provided an opportunity for exposure. Federal and state agencies are aggressively trying to determine if the illness was related to the facility visit or past travel. The latest round of testing for the investigator was delayed due to the recent winter weather conditions near the person's home.

The other members of the investigative team are being tested for possible exposure to the bacteria for baseline comparison and possible future diagnosis. This testing will provide some indication regarding route of transmission.

The CDC, USDA and the Environmental Protection Agency (EPA), are working with Tulane University as well as state and local officials to identify, isolate, mitigate and prevent further transmission of BURKHOLDERIA PSEUDOMALLEI within TNPRC. Environmental testing, including air, water and soil sampling, have been negative to this point.

Situational Update: Wednesday, March 4th, 2015, as of 2pm CST:

CDC:

-CDC and USDA/APHIS investigators, as part of their ongoing efforts, continue to focus efforts on the veterinary clinic as a possible source of cross-contamination between the animals; all five were seen at the clinic before it was decontaminated. The investigation continues into how the bacteria might have migrated to the primate colony from the select agent laboratory.

-All Tulane staff identified as greatest risk and who submitted samples have tested negative for exposure to the bacterium. The staff at greatest risk included lab workers, veterinary staff and facilities services personnel who cleaned the lab or the clinic.

Tulane:

-Continues to work with federal and state officials to determine how the non-human primates may have contracted the bacteria.

USDA:

- As part of the ongoing effort to manage the release of Burkholderia pseudomallei from the Tulane National Primate Research Center, USDA and Louisiana State officials are developing a plan to test wildlife in and around the facility in order to evaluate whether organism exists in rodents, raccoons, and possums. If infected, wildlife have the potential to carry Burkholderia pseudomallei to other areas, so is important to know whether they are impacted.

*****State agencies and St. Tammany Parish are in the process of developing both short and long range monitoring plans to be carried out by Tulane and the federal agencies involved in the oversight of this private facility.*****

Melioidosis, also called Whitmore's disease, is an infectious disease that can infect humans or animals and is treatable with antibiotics. The disease is caused by the bacterium *Burkholderia pseudomallei*.
It is predominately a disease of tropical climates, especially in Southeast Asia and northern Australia where it is widespread. The bacteria causing melioidosis are found in contaminated water and soil. It is spread to humans and animals through direct contact with the contaminated source. It is not known to spread from human to human or from animal to human.

CDC's role is to protect the health and safety of researchers and the public. For more information about melioidosis, visit http://www.cdc.gov/melioidosis/index.html. Questions regarding the investigation and remediation activities should be directed to CDC (Jason McDonald) at 404-387-3660. Questions regarding the TPNRC facility should be directed to Tulane (Mike Strecker) at 504-512-1347. All other questions or concerns should be directed to Mike Steele at Mike.Steele@La.gov .

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